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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,227	02/18/2000	Michael E. Ring	CRD 00036	7857

7590 01/28/2003

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/507,227

Applicant(s)

RING ET AL.

Examiner

Melody M. Burch

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-- Th MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-21 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-21 and 23-30 is/are rejected.
- 7) ☒ Claim(s) 9 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "at least one brake means" first claimed in lines 2-3 of claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 5, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5566795 to Barefoot in view of US Patent 3937295 to Wright.

Re: claims 1, 14, and 15. Barefoot shows in figure 1, 4, and 7 an apparatus engageable with a brake assembly for automatically applying at least one brake means secured to a railway vehicle with the brake assembly, the apparatus comprising: an operating means 60,62,64,76,72,78,80 having at least one gear 64, the at least one

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gear being engageable with at least one gear 66 of a gear assembly disposed in the brake assembly for operating the gear assembly in a direction which will cause an application of the at least one brake means, a source of fluid pressure 74 connected to the operating means for periodically supplying a predetermined pressure to the operating means at least sufficient to cause such application of the at least one brake means, a means 84 connected to the source of fluid pressure for initiating a supply of the predetermined pressure to the operating means thereby causing an automatic application of the at least one brake means by the brake assembly, and a timing means 82 connected intermediate the operating means and the source of fluid pressure for controlling the predetermined pressure being periodically supplied to the operating means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the at least one gear of the gear assembly of Barefoot to have been disposed in a housing member of the hand brake assembly, as taught by Wright, in order to provide a means of shielding the gear from debris.

Re: claims 4 and 5. Barefoot shows in figure 7 the limitation wherein the operating means includes at least one valve means 78,80 for connecting the source of fluid pressure to the operating means.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright as applied to claim 1 and further in view of US Patent 4978178 to Engle. Engle '178 teaches in figure 1 the use of an overload protection means 15 connected to operating means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the

apparatus of Barefoot, as modified, to have included an overload protection means, as taught by Engle, in order to prevent the occurrence of excessive brake application forces.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright as applied to claim 1 and further in view of US Patent 5884985 to Ganzel et al. Ganzel et al. teach in col. 3 lines 31-33 the use of a plurality of hydraulic valves with venting means connecting the source of fluid pressure to the operating means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valves of Barefoot, as modified, to have included venting means, as taught by Ganzel et al., in order to provide an exhaust means to relieve pressure build up in the valves.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright and US Patent 5884985 to Ganzel et al. as applied to claim 7, and further in view of US Patent 4934214 to Otte. Barefoot, as modified, shows a motor 60, but does not disclose the specific makeup of the motor. Otte teaches in figure 1 the use of motor 100 including a piston member 9 connected via duct 2 to a source of fluid pressure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the motor of Barefoot, as modified, to have included a piston member, as taught by Otte, in order to provide a means to actuate the motor and consequently the connecting gear assembly.

7. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright as applied to claim 1 and further

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in view of US Patent 5813731 to Newman, II et al. Newman, II et al. teach in figure 4 the use of a push button 250 as a manual means of brake application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pressure initiating means of the apparatus Barefoot, to have included a push button, as taught by Newman, II et al., in order to provide a manual means of initiating the supply of pressure.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of Wright and Engle as applied to claim 3 above, and further in view of WIPO 98/28174 (Corresponding to U.S. Patent 6186602 to Jonner et al. for column and line numbers). WIPO 98/28174 teaches the use of an overload protection means in the form of a pressure regulating means in col. 1 lines 55-56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the overload protection means of Barefoot, as modified, to have included a pressure regulating means, as taught by WIPO 98/28174, in order to provide a means of preventing the occurrence of excessive brake application forces.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright as applied to claim 1 and further in view of US Patent 3782785 to Budzich. Budzich teaches the use of a slip clutch to serve as an overload protection means in lines 12-14 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Barefoot to have included a slip clutch, as taught by Budzich, in order to provide a means of preventing the occurrence of excessive brake application forces.

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10. Claims 18, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright in view of Engle '178. Barefoot shows in figure 1, 4, and 7 an apparatus engageable with a brake assembly for automatically applying at least one brake means secured to a railway vehicle with the brake assembly, the apparatus comprising: an operating means 60,62,64,76,72,78,80 having at least one gear 64, the at least one gear being engageable with at least one gear 66 of a gear assembly disposed in the brake assembly for operating the gear assembly in a direction which will cause an application of the at least one brake means, a source of fluid pressure 74 connected to the operating means for periodically supplying a predetermined pressure to the operating means at least sufficient to cause such application of the at least one brake means, a means 84 connected to the source of fluid pressure for initiating a supply of the predetermined pressure to the operating means thereby causing an automatic application of the at least one brake means by the brake assembly, and a timing means 82 connected intermediate the operating means and the source of fluid pressure for controlling the predetermined pressure being periodically supplied to the operating means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the at least one gear of the gear assembly of Barefoot to have been disposed in a housing member of the hand brake assembly, as taught by Wright, in order to provide a means of shielding the gear from debris.

Engle '178 teaches in figure 1 the use of an overload protection means 15 connected to the operating means. It would have been obvious to one of ordinary skill

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in the art at the time the invention was made to have modified the apparatus of Barefoot, as modified, to have included an overload protection means, as taught by Engle, in order to prevent the occurrence of excessive brake application forces.

11. Claims 19, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright in view of Engle '178 as applied to claim 18, and further in view of Ganzel et al. and Otte. Barefoot shows in figure 7 the use of at least one valve means 78,80 connecting the source of fluid pressure to the operating means. Ganzel et al. teach in col. 3 lines 31-33 the use of a plurality of hydraulic valves with venting means connecting the source of fluid pressure to the operating means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valves of Barefoot, as modified, to have included venting means, as taught by Ganzel et al., in order to provide an exhaust means to relieve pressure build up in the valves. Barefoot, as modified, shows a motor 60, but does not disclose the specific makeup of the motor. Otte teaches in figure 1 the use of motor 100 including a piston member 9 connected via duct 2 to a source of fluid pressure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the motor of Barefoot, as modified, to have included a piston member, as taught by Otte, in order to provide a means to actuate the motor and consequently the connecting gear assembly.

12. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright in view of Engle '178 as applied to claim 18 above, and further in view of Kanjo et al. '363.

Re: claim 23. In lines 9-11 of the abstract Kanjo et al. '363 teach the use of pneumatic source of fluid pressure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus and a hand brake assembly of Barefoot, as modified, to have included a pneumatic source of fluid pressure, as taught by Kanjo et al. '363, in order to provide an alternate source of driving the brake application.

Re: claim 24. Kanjo et al. '363 teach in figure 21 the use of a timing means in the form of a reservoir and a choke valve 311, 326 connected intermediate the operating means and source of fluid pressure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the timing means of Barefoot to have been constructed in the form of a reservoir and a choke valve as taught by Kanjo et al. in order to provide an alternate means of controlling pressure being supplied to the operating means.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright in view of Engle '178 as applied to claim 18 above, and further in view of Newman, II et al. Newman, II et al. teach in figure 4 the use of a push button 250 as a manual means of brake application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pressure initiating means of the apparatus Barefoot, to have included a push button, as taught by Newman, II et al., in order to provide a manual means of initiating the supply of pressure.

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14. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright in view of Engle '178 as applied to claim 18 above, and further in view of WIPO 98/28174 (Corresponding to U.S. Patent 6186602 to Jonner et al. for column and line numbers). WIPO 98/28174 teaches the use of an overload protection means in the form of a pressure regulating means in col. 1 lines 55-56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the overload protection means of Barefoot, as modified, to have included a pressure regulating means, as taught by WIPO 98/28174, in order to provide a means of preventing the occurrence of excessive brake application forces.

15. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of US Patent 3937295 to Wright in view of Engle '178 as applied to claim 18 above, and further in view of Budzich. Budzich teaches the use of a slip clutch to serve as an overload protection means in lines 12-14 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Barefoot to have included a slip clutch, as taught by Budzich, in order to provide a means of preventing the occurrence of excessive brake application forces.

16. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 3937295 to Wright in view of Engle '178. Wright shows in figures 1 and 2 an electrically operated apparatus 26,84,32,30 engageable with a hand brake assembly 24,42,62,68,16 for automatically electrically applying at least one brake means 18

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secured to a vehicle with the hand brake assembly, the electrically operated apparatus comprising: (a) a motor means 26 having a rotatable shaft 30 carrying a gear member or superficial teeth or threads thereon, the gear member engageable with at least one gear 42 of a gear assembly disposed in a housing member 24 of the hand brake assembly for operating the gear assembly in a direction which will cause an application of the at least one brake means; and (b) a means 84 connected to the motor for starting the motor and thereby initiating an automatic electrical application of the at least one brake means by the hand brake assembly, but does not disclose that the vehicle is specifically a railway vehicle. Engle teaches the use of an apparatus engageable with a hand brake assembly particularly of a railway vehicle in col. 1 lines 8-9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vehicle of Wright to have included a railway vehicle, as taught by Engle, in order to provide a means of automatically decelerating a railway vehicle. (Examiner notes that the Dictionary of Mechanical Engineering, 3rd Edition, 1985 defines a gear as "any mechanical system for transmitting motion").

Allowable Subject Matter

17. Claims 9 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

18. Applicant's arguments filed 11/6/02 with respect to the claims have been considered but are not persuasive.

With regard to claims 1, 18, and 30. Applicant argues that Barefoot teaches the use of a system for applying "a hydraulic braking system... apply[ing] a braking force to the axle for slowing or stopping the rail car". Examiner notes that on pg. 1 lines 3-6 Applicant states the use of "hand brake assemblies for use on railway type vehicles...to automatically activate and apply the brakes on such railway vehicle" and states on pg. 5 lines 10-14 that a "means is connected to the source of fluid pressure for initiating the supply of such predetermined pressure to the operating means thereby causing an automatic application of such brake means by the hand brake assembly". Such statements do not suggest that the hand brake is a parking brake used specifically to be "applied after the rail car has stopped and...used to prevent movement of the car from the stopped position" as argued by Applicant on pg. 4 of the Remarks. Additionally, it is noted that such arguments are more specific than the claim language. Examiner notes that in light of Applicant's broad functional description of hand brake assemblies, the apparatus of Barefoot may be interpreted as being engageable with a hand brake assembly, as broadly recited, since in col. 7 lines 60-61 it is disclosed that the control of the brake system may be manually operated. It is maintained by Examiner that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the at least one gear of the gear assembly of Barefoot to have been disposed in a housing member, as taught by Wright, in order to provide a means of shielding the at least one gear from debris. Applicant also argues that the braking system of Wright is designed for automobile application which are quite different than those of railway applications. Examiner notes that the braking system of Wright may be

utilized on brakes of "an automobile, a trailer, or the like" as taught in line 3 from the bottom of the abstract. Examiner maintains that a railway vehicle is similar to "a trailer, or the like" and that both vehicles may employ similar brake structures to stop or prevent motion.

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

cmmb 1/26/03

mmb

January 26, 2003

M.C. Graham
1/28/2003

**MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310**